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ABSTRACT

A 4-year demonstration Total Communication Project was implemented at three schools (an elementary, a middle, and a high school) serving hearing impaired students. The goal of the project was for the six participating teachers to become consistent in their role modeling of English and American Sign Language (ASL), through weekly inservice on ASL and guidance in its appropriate use. Although English was the primary language of the classroom, ASL was used as an intervention tool. The paper describes: (1) techniques used for identifying classroom situations that call for the use of ASL, (2) discourse situations that influence the use of different language codes in total communication classrooms, and (3) guidelines for code-switching between English and ASL. The paper reviews the limited research on the effectiveness of ASL as an instructional tool, notes policy considerations, and offers a theoretical framework which sees ASL as a means of increasing deaf students' comprehension of instructional information. A variety of related issues are briefly addressed including the combined expression of signs and speech, the use of two languages in the classroom, attitudes toward ASL intervention, the conceptual function of signs, and the role of fingerspelling in instruction. 43 references. (DB)

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Research Series No. 193

# RATIONALE AND STRATEGIES FOR AMERICAN SIGN LANGUAGE INTERVENTION

David A. Stewart

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Abstract

A four-year demonstration Total Communication Project was established at three hearing-impaired programs at the elementary, middle, and high school levels in one school district. The goal of the project was for teachers to become consistent in their role modeling of English and American Sign Language (ASL). English was the primary language of the classroom and ASL was used as an intervention tool. The use of ASL in the instruction of hearing-impaired students has received little attention from the research field. Although there is strong support for using ASL as an instructional tool, there has been almost no research on its effectiveness in the classroom. By implementing an ASL intervention program this project is a first step towards setting up an environment conducive to investigating the effectiveness of ASL intervention. The purpose of this paper is to describe (a) techniques used for identifying classroom situations that call for the use of ASL, (b) discourse situations that influence the use of different language codes in total communication classrooms, and (c) guidelines for code-switching between English and ASL.

# RATIONALE AND STRATEGIES FOR AMERICAN SIGN LANGUAGE INTERVENTION

David A. Stewart[1]

A four-year demonstration Total Communication Project was established at three hearing-impaired programs at the elementary, middle, and high school levels in a midwest school district. The goal of the project is to prepare "teachers to be consistent in their use of English and American Sign Language." In accordance with the district's language policy, English is used as the primary language of the classroom with a modified form of Signed English used to provide a visual representation of grammatically correct English; and ASL is used as a means of assisting and intervening in communication processes (Stewart, 1988). At all times the project emphasizes the need to maintain an environment in which students are exposed to consistent linguistic input.

The implementation of consistent linguistic input in English and ASL is one way of intervening in the cognitive processing of deaf students. Typically, deaf students are instructed in a form of pidgin signing or English-like signing (Kluwin, 1981; Marmor & Pettito, 1979; Maxwell & Bernstein, 1985). Rarely do teachers actually use ASL for instructional purposes (Woodward & Allen, 1987). Yet, in the classroom, language acquisition is influenced by the nature of teacher talk. Teachers' use of Signed English, Signing Exact English, and other forms of manually coded English systems has been shown to impact positively on the English language development of deaf students (e.g., Bornstein & Saulnier, 1981; Brasel & Quigley, 1977; Crandall, 1978; Raffin, Davis, & Gilman, 1978). Likewise, studies on the use of ASL in the classroom setting (e.g., Goldberg & Bordman, 1975; Sallop, 1973; Stewart & Hollifield, 1988) and

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evidence from deaf children of deaf parents who learn ASL at an early age revealed both the effectiveness of ASL in enhancing comprehension and the advantages of exposing deaf students to ASL as part of their education.

More generally, Wong-Fillmore (1985) found that successful teachers instructing students with limited English proficiency modified their speech in such a way that allowed them to (a) maintain a clear separation of languages, (b) emphasize comprehension rather than production, (c) use grammatically appropriate language with students, and (d) ask questions that accounted for the different levels of the students. Hence, in a program where English is the primary language of instruction and where the students have limited English proficiency, exposure to ASL in context-specific situations would be an example of actively intervening in the cognitive performance of deaf learners (Saif, 1985). ASL intervention requires that the student attend to and analyze a set of syntactic structures that is different from English. ASL intervention assumes, of course, that the students understand ASL. The purposes of this paper are to describe the use of ASL as an intervention tool and to examine various issues related to this process including its theoretical framework.

## Background

Over the past two decades there has been increasing attention to research in American Sign Language. A brief survey of the literature illustrates a wide range of interests including production of signs, perception of signs, memory for signs, acquisition of sign language by deaf children, fingerspelling, sociolinguistic aspects of sign languages, and many other areas. However, the pedagogical application of ASL has received relatively little attention in comparison to the amount of energy being spent in verbally promoting it outside of the classroom; that is, despite strong support for the instructional use of

ASL that is coming from deaf individuals, teachers, and other professionals associated with the education of the deaf, there has been little consistent research on a host of issues such as teacher preparation, the effects of code-switching, and measurement of ASL proficiency in teachers and students that are related to the systematic use of ASL within an educational setting.

Even in the absence of statistics it is not unreasonable to state that there are only a handful of total communication programs in the nation that, in addition to recognizing the instructional value of ASL, have taken administrative measures to implement its use in their classrooms. A scarcity of deaf teachers (Johnson, 1986), lack of ASL proficiency among all teachers (Woodward & Allen, 1987), neglect of ASL instruction in teacher preparation programs (Akamatsu & Stewart, 1987; Maxwell, 1985), and lack of endorsement in communication and language policies in education of the deaf are some of the barriers hindering the incorporation of ASL skills into the communication behavior of teachers. Yet, teachers from all educational settings have expressed support for including ASL into total communication classrooms (Stewart, 1983).

However, despite the lack of research on ASL instructional activities, a survey of the few studies that have examined ASL does reveal initial support for greater classroom use of ASL. Sallop (1973) incorporated ASL into an English as a second language program. English was emphasized only after proficiency in ASL had been attained by the students. Goldberg and Bordman (1975) described the English language program at the Tutorial Center of Gallaudet where ASL was used in all discourse and English was mainly practiced in written form. A similar approach was taken at the National Technical Institute for the Deaf (Neilson & Armour, 1983) and at a residential school (Akamatsu & Armour, 1987). Stewart & Hollifield (1988) described a team-teaching approach to the bilingual classroom. Over a one-year period one of the

team teachers consistently used Signed English and the other used ASL in all interactions with the students. In each of the studies it was noted that the success of their programs depended upon the use of ASL to facilitate comprehension of instruction.

Other works that have examined the classroom use of ASL include guidelines for implementing a bilingual program (Reagan, 1986); transfer of existing knowledge in bilingual studies with hearing students to theoretical models with applications to the deaf population (Barnum, 1984; Luetke-Stahlman, 1983, 1986; Stewart, 1987b); and the experimental investigation of language dominance in ASL/English bilingual deaf students (Stewart, 1985). Taken together, these studies and others provide a basis for initiating pedagogical applications of ASL. Unfortunately, the field has been hesitant to translate research findings into practice. Indeed, it appears that without stronger support from educators and administrators, the application of ASL in classrooms will continue to be restricted to time periods framed by the occasional ASL-related research project.

## Policy Considerations

Given the foregoing constraints on using ASL in classrooms, there was some concern that the effectiveness of the proposed ASL intervention strategies might be hampered without official recognition by the school district of the potential benefits of using ASL. Such recognition should help create a classroom environment in which teachers would be able to use ASL over an extended period of time. This type of action by the school district would help elevate ASL to a higher prestige than normally accorded it by the educational establishment (Woodward, 1982). To this end, the midwest school district in which this project occurred adopted a communication and language policy that endorsed the

use of ASL as an intervention tool. The district's position on the instructional use of ASL is reflected in the following statement:

> For many hearing-impaired individuals American Sign Language (ASL) can make a significant contribution to their educational and social development. The strength of ASL lies in the fact that it has evolved to meet the demands of a visual-spatial communication medium. It is both efficient and desirable, for example, for its capacity to convey abstract concepts, depict the complexity of real-world issues, and portray the emotions of a speaker. In these respects and others it is advantageous to include ASL as part of a teacher's repertoire of linguistic and signing skills. (Stewart, 1988, p. 10)

Hence, this policy was the vehicle through which application and investigation of the instructional use of ASL was initiated.

It should be noted that the district makes no claims to having available a proven program for teachers' use of ASL. It is recognized that a lack of research on the instructional use of ASL means that time will be needed to resolve logistics and issues involved in ASL intervention. In addition, the field in general does not, as yet, fully understand the ramifications of using ASL on a full-time basis in the classroom. Thus, by using ASL as a means of intervening in and assisting classroom communication processes, a situation is created through which the use of ASL will be guided, in part, by what past research on ASL has shown, and at the same time teachers will have the freedom to explore the use of ASL in enhancing their own instructional effectiveness.

## Theoretical Framework

The value of using ASL to enhance classroom instruction has likely always been recognized by some of the teachers in the field. This is especially true of deaf teachers, many of whom teach at the secondary level. But for other teachers the prospect of using ASL raises the very real concern of not only learning it but also of how to use it effectively in their classrooms. Our first objective in meeting this concern was to derive an acceptable definition

for ASL intervention. In this matter, two critical considerations were (a) how specific or broad the definition should be and (b) whether a student's comprehension or production abilities would be the focus of the intervention.

With respect to the first of these issues, the framework for describing ASL intervention was derived from the field of language intervention. In general, language intervention is often described in terms of the "different theoretical positions of the developers and practitioners of intervention strategies" (Fey, 1986, p. 49). Consequently, there is no prevailing conceptual underpinning that links together all language intervention approaches. In contrast, disparities in theoretical approaches can be accounted for by using a broad definition. For example, Fey (1986) stated that language intervention occurs when

> some intervention agent (clinician, teacher, parent, sibling, etc.) stimulates or responds to a child in a manner that is consciously designed to facilitate development in areas of communication ability that are viewed as being at risk for impairment. (p. 49)

Because of the variety of ways in which ASL can be used in the classroom and the lack of longitudinal research to substantiate the claims of any one method, it appears that a broad definition for ASL intervention along the lines of Fey's would be most appropriate.

The question of whether a student's comprehension or production abilities would be the focus of the intervention was answered in a policy decision by the school district. Currently, the district does not endorse students' acquisition of ASL skills as one of its goals, although it does recognize that many students will nevertheless learn it from their deaf parents or deaf peers. Its major educational goal is to promote the development of English language skills and academic achievement. Therefore, instructional use of ASL was limited to that of facilitating comprehension of the materials being presented.

The use of ASL intervention to enhance students' comprehension of instructional materials has some research support. For example, Morariu and Bruning (1984) investigated the influence of language modality and syntax on tests involving the free-recall of meaningful passages presented in four language contexts. Students recalled ASL contexts better than English contexts in both the signed and print modalities. Stewart (1987a) found that students comprehended manual-only presentations of ASL stories better than Signed English stories. However, when speech (with or without audition) was added to the presentations there was no significant difference in comprehension of stories.

Research on hearing individuals reveals that bilinguals have greater comprehension of stories presented in their stronger language and that decoding efficiency is slower in the nondominant language (Dornic, 1979, 1980; Macnamara & Kushnir, 1971); students who learn concepts in two languages become more flexible and able to handle these concepts, and students who understand instructional materials are more likely to succeed in school (Engle, 1975; Ramos, Aquilar, & Sibayan, 1967). Hence, it is not unreasonable to suggest that language context may facilitate deaf individuals' access to meaning (Morariu & Bruning, 1985). Martin (1985) suggested that

> cognitive intervention programs for hearing-impaired children should recognize and use language in a systematic manner since the linguistic deficits of hearing-impaired are considered to be partly responsible for some of their difficulties in cognition. (p. 8)

Thus, ASL intervention as described here is a constructive means of increasing deaf students' comprehension of instructional information.

Given this framework for defining ASL intervention, what is the relationship between ASL intervention and mental processes? Few studies have examined the link between signed languages and mental processes, therefore, it is not possible to identify definite cognitive effects of switching languages during

instruction. Likely, comprehension of materials will improve if students comprehend ASL better than English. Better comprehension may also lead to a greater retention of learned materials. However, not so obvious are other effects of coding different languages.

For example, the work of Siple, Fischer, and Bellugi (1977) suggested that deaf subjects encoded ASL handshapes and English words differently. In a review of the literature, Kettrick and Hatfield (1986) found that deaf individuals use a variety of codes (e.g., manual-, visual-, and phonology-based) to memorize English words and letters, and that "deaf signers store information in an abstract form of representation that is independent of phonological or syntactic surface structures" (p. 258). Consideration must also be given to the interaction of different linguistic systems during codeswitching (Grosjean & Soares, 1986; Stewart, 1987a). Grosjean & Soares (1986) noted that two language systems may be active during periods of mixed-language productions although they were unable to describe how the two systems might interact with each other. Mixed-language production is an important concept because it might occur, for example, when teachers incorporate ASL signing characteristics (e.g., gaze shifting, directionality) into their English signing behavior or borrow initialized signs from a manually coded English system when signing in ASL.

Grosjean and Soares (1986) also suggest that a general language monitoring device is used by the bilingual individual to determine which language is being used. Little is known about the principles behind the operation of this device. In the English/ASL bilingual classroom, other cognitive factors that may influence the instructional effectiveness of using two languages include the degree of proficiency that students and teachers have in English and ASL and students' metacognitive strategies for dealing with information presented in either language. Undoubtedly, many more conjectures could be brought forth;

however, far more research exploring the relationship between communication practices in education of the deaf and mental processes is needed before we can better assess the impact of English/ASL bilingual instructional strategies.

Having established the parameters for describing ASL intervention, I define it as follows,

> ASL intervention refers to the processes by which an intervention agent (e.g., teacher, language specialist) uses ASL in interactions with deaf students after determining that ASL is necessary to facilitate comprehension in a particular discourse situation.

To accomplish this, the intervention agent must first analyze a discourse situation to determine the need to use ASL. If ASL is necessary, the agent then uses ASL for a length of time dictated by the initial discourse factors that suggested its use. After this intervention period, the agent then switches back to using an English-based sign code. Figure 1 provides a schematic representation of ASL intervention. In this schema, the nature of a discourse situation reveals the potential contribution of ASL to enhancing comprehension in agent/student interactions.

From Figure 1 it should be obvious that almost all classroom situations can be conducive to the use of ASL intervention strategies. Thus, teachers must be prepared to analyze a diverse range of both instructional and non-instructional circumstances which would include teacher-initiated discourse (e.g., introduction of a lesson, explanation of instructions), student-initiated discourse (e.g., spontaneous remarks, questions), and discourse stemming from an outside agent (e.g., public address system, classroom visitor). Also included would be situations resulting from student's interactions with printed materials. A teacher, while examining written responses to a story that a student had read, might notice a pattern of misinterpretation of the story. The teacher

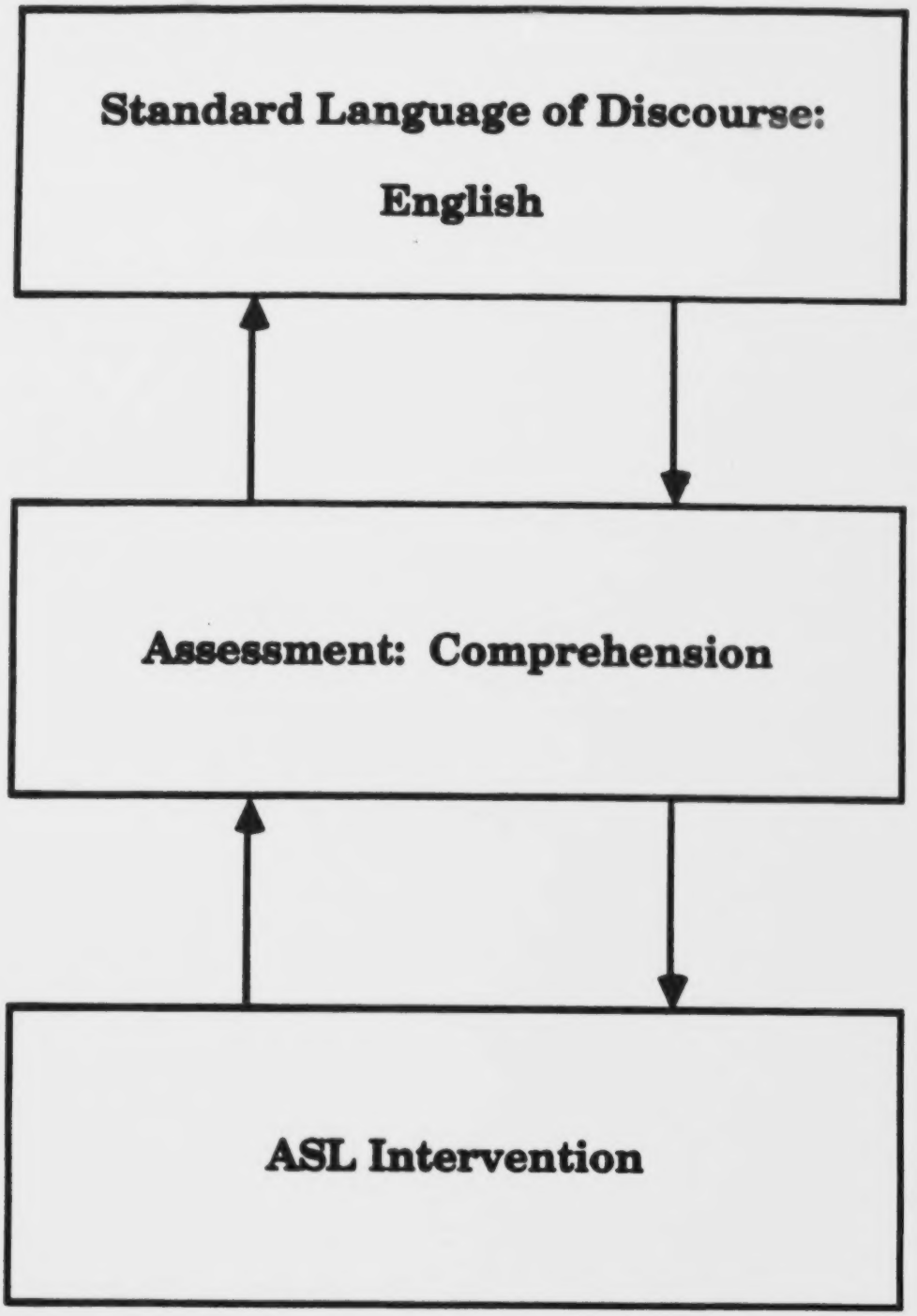


Figure 1. Processes governing the use of English and ASL in classroom discourse situations.

might then decide that a translation of the story to ASL would increase the student's comprehension of that story.

## ASL Intervention Program

ASL intervention strategies were implemented during the last three months of the second year of the project (i.e., Spring 1989). Prior to this time the teachers attended weekly inservices on ASL which started at the beginning of Year Two. Because it may take several years before individuals become fluent in the expressive and receptive use of ASL, teachers were not expected to be able to implement all aspects of the ASL intervention program. Nevertheless, it was anticipated that during the early stages of the inservice that teachers would be able to use some of their ASL skills. For example, teachers were taught how to use such ASL characteristics as locatives, classifiers, and indexic referencing (Stewart, Akamatsu, Hunter, Lauer, Krugh, & Ng, 1989). Instructional use of these characteristics was demonstrated in the classroom by two of the instructors who team taught on a weekly basis with the teachers. Therefore, it was not unreasonable for the teachers to also use these ASL characteristics.

The ASL intervention program is still in its developmental stage, a process that may take as long as five years or more to complete. The value of describing it at this time is that it illustrates a means of getting teachers to incorporate ASL skills into their instructional repertoire. Hence, the four ASL intervention strategies that are about to be outlined are components of an initial attempt to use ASL as an intervention tool. The four strategies of the ASL intervention program are as follows:

1. Use ASL intervention when certain discourse situations arise. Support for this was drawn from research on the effects of context on teachers' communication behavior (Stewart, Akamatsu, & Bonkowski, 1988). In their exploratory

study, Stewart et al., revealed that teachers' communication behaviors appeared to be influenced in a consistent manner by the nature of a discourse situation. Specifically, they found that teachers were more likely to incorporate ASL characteristics into their signing behavior when the situations involved conducting of class business (e.g., off-the-topic and prelesson remarks, reprimanding of students); sense of humor; introduction to a topic; repeating an explanation; and miscellaneous comments not related to the lesson or class business. Thus, teachers were instructed to consider using ASL during these situations. For example, teachers were encouraged to introduce topics in ASL first if they felt that this would facilitate better comprehension of the materials than if the presentation was in English. Obviously, given the school's policy to use English as the primary language of instruction, it was not feasible for teachers to use ASL if they felt that students would comprehend an English-based presentation of the introduction.

2. Use ASL intervention to facilitate comprehension of instructions. Although broadly defined, this strategy is not to be used indiscriminately whenever a student indicates a lack of understanding of instructions presented in English. Still, teachers must take measures to insure that their students do understand the concepts being presented. Thus, it is important that teachers understand the objectives of the task at hand and then determine if maintenance of an English-based instruction at the possible expense of comprehension is warranted. This might be the case, for example, where a teacher is conducting a language experience lesson with a set of activities designed to accompany the presentation of certain phrases (e.g., The ball is rolling under the table. Will you please go and get it?). The goal of this lesson is the acquisition of a particular set of English phrases. Although a child might not at first fully understand the English phrases used by the teacher, the accompanying activities

provide the framework for future comprehension. Therefore, ASL intervention during this lesson may not be appropriate.

In contrast, there are many instructional tasks in which comprehension of the material is critical. A case in point is shown in teaching about the formation of clouds. This is a difficult concept to describe in words or in signs. An behavioral objective during this lesson might be for the students to be able to describe verbally how clouds are formed. If the students did not understand the English presentation of this concept then ASL intervention should be considered.

3. Use ASL intervention to enhance the meaning of English phrases. The school district uses a modified form of Signed English which includes a number of ASL characteristics, examples of which are verb directionality (e.g., I MET HIM), inflection of signs to distinguish between noun and verb pairs (e.g., CHAIR/SIT), incorporation of numbers in pronouns (e.g., TWO-OF-US), incorporation of numbers in time (TWO-WEEKS-FROM-NOW), and negative incorporation (e.g., DON'T-WANT) (Stewart, 1988). A key component of this foregoing process is that teachers give explicit instructions to their students on the relationship of a manual sign (e.g., YOU-TWO) to its printed equivalent(s) (e.g., two of you; you two). This strategic use of explicit instructions has been shown to facilitate print knowledge growth (Andrews & Mason, 1986). In addition to using these ASL characteristics, teachers are encouraged to use ASL phrases to clarify or emphasize the meaning of English phrases. For example, after signing in English, THE STREET WAS PACKED WITH PEOPLE, the teacher has the option of following with the ASL translation in which the classifier for many people and the appropriate facial expression for many are used.

It is not necessary nor practical for teachers always to translate English phrases simply for the sake of emphasizing a point. An analogy to this strategy

are situations in which individuals will rephrase spoken utterances when they feel that a listener did not fully understand what they have just said. Intuition, the presence of nonverbal cues from the listener, the complexity of 32an utterance, and the linguistic goal of a discourse situation are some of the factors that teachers are asked to consider before translating an English utterance to ASL.

4. ASL intervention should be used experimentally in situations determined by the teacher. Each teacher needs to learn for him/herself when and how ASL best increases instructional effectiveness. What is proposed here is that teachers should not be restricted by a set of specified situations for using ASL. There is much to be learned about the pedagogical application of ASL and teachers are in an ideal position to experiment in this area. Willingness to experiment will be influenced by the attitudes of teachers and administrators, prior success in using ASL intervention, responsiveness of students to ASL intervention, support of project personnel, and other factors. Some possibilities for experimentation are dual presentation of stories in English and ASL, concentrated use of ASL in subject areas where a premium is placed on comprehension of concepts (e.g., science, social studies), and during discussions of deaf culture and deaf heritage issues. Teachers' experimentation with ASL intervention will be carefully observed to determine both the advantages and disadvantages of certain strategies.

## Teacher Preparation

The procedures for preparing teachers ($N = 6$) to use each of the foregoing ASL intervention strategies occurred during evening inservices as well as when the teachers were teaching in their own classrooms. During the inservices, instructors introduced, discussed, and demonstrated strategies. Hypothetical

situations were also created to allow teachers to practice these strategies. To reinforce the materials being learned, two of the instructors team taught with the teachers for one hour each week. This gave the instructors the opportunity to demonstrate ASL intervention as well as to provide feedback on the teachers' use of these strategies.

Prior to implementing ASL intervention strategies teachers need to diagnose a student's need for ASL, a process that is still in its development phase in this project. It is known that diagnosis faces some restrictions in that the program is new, there is a lack of research identifying optimal situations or student characteristics that favor the use of ASL intervention, and the teachers in this project are still in the process of learning ASL. The use of discourse situations as a guideline to using ASL intervention was mentioned earlier in this paper. With respect to student characteristics, it was decided that initially the two project instructors team teaching with the teachers would assist in determining which students would benefit from the use of ASL. This involved (a) assessment of students' ASL skills through informal interactions between instructor and student, (b) assessment of the communication used in students' home environments, (c) assessment of students' linguistic proficiency in signed and written communication, and (d) observations of students' communication behavior with teachers, deaf peers, and others. Future developments in assessing students' ability to benefit from ASL intervention will examine their cognitive abilities. For example, students' recall of stories presented in ASL and Signed English might be a valuable indicator of students' need for ASL or English instructions (Stewart, 1987b).

Researchers kept a record of the application of ASL intervention strategies by each of the teachers. Information was compiled through checklists on frequency and type of ASL intervention, observations from instructors as they

team taught, teacher interviews, weekly discussions with all teachers, transcriptions of videotapes, and interviews with the students. These records provide a basis for refining certain strategies, creating new ones, and evaluating the advantages and disadvantages of this English/ASL bilingual education strategy. Analysis of records have not yet been completed.

## General Considerations and Conclusion

In this paper it was not possible to deal with all of the concerns related to the project. Some of these concerns are now presented to give a broader perspective of the issues involved in dealing with the communication behavior of teachers. First, it must be emphasized that the current project is not an educational remedy for all total communication programs. Although there has been much debate about the use of various modes and languages in education of the deaf, the simple truth is that we have far more questions than answers, and very little research to guide teachers. Thus, our project should not be construed to be a panacea. Rather, it is an attempt to address the issue of teachers' learning to use a manually coded English system and ASL, while simultaneously exploring other issues such as the combined expression of signs and speech, the use of two languages in the classroom, attitudes toward ASL intervention, the complex nature of visually representing English in signs, the conceptual function of signs, the appropriate age for introducing ASL intervention, and the role of fingerspelling as an instructional tool.

Thus far, teachers and administrators have been appreciative of the effort that the research community has made to connect research with practice. The consensus is that training in communication skills will be a critical determinant of effective teaching. Once we have determined the ability of teachers to implement various communication strategies in the classroom and the attendant

effects on students' academic and language performance, we will be in a better position to understand the relationship between communication and learning processes. In view of the difficulty that many hearing individuals have encountered in learning ASL, it might not be feasible for all teachers in our project to become fluent in ASL. This concern along with many others will be evaluated at the end of the project.

Another important issue is that the use of ASL intervention extends beyond the immediate effects that it will have on a student's comprehension. The use of ASL is not an attempt to have students sign "better grammar." As is usually the case in total communication programs, students' production of ASL is not a linguistic goal in our school district. Instead, by focusing on the use of ASL in specific discourse situations, students who have a firm grasp of ASL may become more receptive to what their teachers are saying; that is, with greater access to information they should become more effective communicators. Furthermore, if ASL enhances comprehension, then the meaning of signs in English word order may be facilitated. This in turn may lead students to take a more active role in instructional activities, a strategy that could positively impact on the language development of the students (Wood, Wood, Griffith, & Howarth, 1986). Thus, as more is learned about the effects of various linguistic codes and communication modes on the language development of deaf students, we may find ourselves in a better position to explore the relationship between deaf students' production of language and their comprehension of it.

In addition to the potential positive effects of using ASL intervention techniques, the negative educational effects of mixing languages in the classroom must be considered. Although no attempt is made here to delineate the possibilities in this area, a more general observation is offered. Education of the deaf has been negligent in monitoring and standardizing the

communication behavior of teachers in total communication programs. It appears, for the most part, that it is the prerogative of each teacher to establish a communication standard with little fear that this standard will be scrutinized. Although some might question the benefits of using ASL or a manually coded English system in the classroom, few educators appear overtly concerned that the constant use of pidgin sign may in effect be a detriment to the learning of either English or ASL.

Thus, with respect to communication philosophies and methodologies there is little resistance to the status quo, yet the academic achievements of deaf students remains far behind that of their hearing peers. As this project proceeds, it is possible that both positive and negative effects of using a bilingual approach in the classroom will become evident. Through observation and documentation of these effects and the strategies taken to enhance or eliminate them, it is hoped that communication will become a more meaningful and better understood tool in the education of deaf students.

Finally, ASL intervention is also a means for improving the status of ASL in the school system. In a review of the literature on vernacular languages in education, Engle (1975) found that students' respect for their language increased when it was used in schools and that teachers are better able to relate to the minority community and less likely to have a stereotypic impression about minority students and their language. Although ASL is not the home language of all deaf students, it is a language that they typically acquire fluency in long before they master English. Thus, ASL intervention is not solely an educational matter and, in time, it may lead to greater social awareness of the role of ASL in the education and lives of deaf students as well as to more involvement in the schools by deaf adults who are bilingually fluent in English and ASL.

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